

**REMARKS**

**Status of Claims**

Claims 2-23 and 25-28 are pending in this application, of which claim 2 is independent and claims 25-27 have been withdrawn.

**Claim Rejections – 35 U.S.C. 103**

Claims 2-4, 6, 13 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya et al. (U.S. Patent No. 4,772,303) in view of Roba et al. (U.S. Patent No. 6,584,808). Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya and Roba in view of DiGiovanni et al. (U.S. Patent No. 6,966,201). Claims 7 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya and Roba in view of Barns et al. (U.S. Patent No. 4,842,626). Claims 9 and 11-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya and Roba in view of Onisha et al. (Derwent Abstract of JP 08-067524). Claims 10 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya and Roba in view of Kunio (JP 62-226829). Claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya and Roba in view of Homa et al. (U.S. Publication No. 2003/01213268). Claim 16 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya and Roba in view of Chang et al. (U.S. Publication No. 2002/0194877). Claims 17-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya et al. and Roba in view of Homa and Yokota et al. (U.S. Patent No. 4,793,842). Claims 21 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya and Roba in view of DiGiovanni. Claim 28 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya in view of Roba.

In rejecting independent claim 2, the Examiner asserts that Roba teaches a method for producing an optical fiber preform comprising collapsing the preform tube while applying a pressure of 4kPa in the pipe. Applicants respectfully submit that the pressure recited by claim 2 differs from the pressure disclosed in Roba.

Roba appears to disclose an exhaust pressure of 1 kPa (see, col. 8, line 5 of Roba). However, this pressure value is expressed as a value relative to the atmospheric pressure, i.e., as **a differential value** between inside and outside of the tube (see, col. 8, lines 2-3 of Roba), which is substantially a value relative to the atmospheric pressure. It is noted that Roba expressly states applying “a vacuum slightly *lower than the ambient pressure.*” Thus, the “vacuum” of Roba means the **differential pressure (gauge pressure)** between the inside and the outside of the tube. Thus, the vacuum of 1 kPa of Roba is converted into the absolute pressure of 100.325 kPa, since the atmospheric pressure is expressed as 101.325 kPa as an absolute pressure. In contrast, the pressure value recited in claim 2 is expressed as an **absolute** pressure measured from the absolute vacuum (0 Pa).

As such, it is clear that, at a minimum, Roba fails to disclose the above limitations of claim 2 regarding the absolute pressure in the glass pipe. As the Examiner concedes, Kamiya also fails to disclose the absolute pressure in the glass pipe being maintained at 4 kPa or below, as recited by claim 2. Further, other cited references fail to cure the deficiencies of Kamiya and Roba since none of the remaining cited references disclose or suggest the absolute pressure in the glass pipe be maintained at 4 kPa or below.

Further, Applicants submit that maintaining the absolute pressure in the glass pipe at 4 kPa or below in the collapsing step can promote desorption of water (see, page 12, lines 12-21 of the present disclosure). It is noted that an increment in transmission loss due to the OH

absorption can be reduced by the method of claim 2 (see, page 2, line 23 of the present disclosure), because the method includes a collapsing step in which the absolute pressure in the glass pipe is maintained at 4kPa or below as well as the drying step in which the glass pipe is heated at a temperature of 550 °C or below. It is clear that none of the cited references recognize or suggest the above mentioned effect of maintaining the absolute pressure in the glass pipe at 4 kPa or below in the collapsing step.

Based on the foregoing, it is clear that none of the cited references, taken alone or in any combination thereof, renders claim 2 obvious. Therefore, Applicants respectfully request that rejection of claim 2 be withdrawn. Consequently, claim 2 is allowable. In addition, since claims 3-23 and 25-37 depend upon claim 2 and none of the cited references disclose or suggest the above discussed limitations of base claims 2, it is submitted that these claims are also patentable over the cited references for at least the same reasons as claim 2.

**Conclusion**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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